

CLAIMS

1. A method of protecting keratin materials from the harmful effects of pollution, comprising topically applying a composition comprising an effective amount of cubic gel particles to said keratin materials.

2. The method of claim 1, wherein said effective amount ranges from 0.1 to 20% by weight, based on the total weight of the composition.

3. The method of claim 1, wherein the cubic gel particles are in aqueous dispersion.

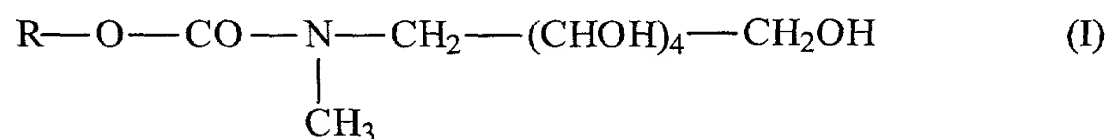
4. The method of claim 1, wherein the cubic gel particles are formed from a mixture comprising:

(i) 0.1% to 15% by weight, relative to the total weight of the composition, of at least one compound selected from the group consisting of 3,7,11,15-tetramethyl-1,2,3-hexadecanetriol, phytanetriol, N-2-alkoxycarbonyl derivatives of N-methylglucamine and unsaturated fatty acid monoglycerides; and

(ii) 0.05% to 3% by weight, relative to the total weight of the composition, of at least one dispersing and stabilizing agent selected from the group consisting of surfactants that are water-soluble at room temperature and containing a saturated or unsaturated, linear or branched fatty chain containing from 8 to 22 carbon atoms.

5. The method of claim 4, wherein a weight proportion of compound (i) to said dispersing and stabilizing agent (ii) ranges from 2 to 200.

6. The method of claim 4, wherein said N-2-alkoxycarbonyl derivative of N-methylglucamine corresponds to formula (I) below:



in which R represents a branched alkyl radical containing from 6 to 18 carbon atoms.

7. The method of claim 6, wherein said N-2-alkoxycarbonyl derivative of N-methylglucamine is chosen from N-2-hexyldecyloxycarbonyl-N-methylglucamine, N-2-ethyl-hexyloxycarbonyl-N-methylglucamine and N-2-butyloctyloxycarbonyl-N-methylglucamine, and mixtures thereof.

8. The method of claim 4, wherein the cubic gel particles contain as compound (i) a mixture consisting of from 1% to 40% by weight of phytanetriol relative to the weight of the mixture and from 60% to 99% by weight of N-2-alkoxycarbonyl derivative of N-methylglucamine relative to the weight of the mixture.

9. The method of claim 4, wherein said unsaturated fatty acid monoglyceride is selected from the group consisting of glyceryl monooleate and glyceryl monolinoleate.

10. The method of claim 4, wherein the cubic gel particles contain as compound (i) a mixture consisting of from 1% to 50% by weight of phytanetriol relative to the weight of the mixture and from 50% to 99% by weight of unsaturated fatty acid monoglyceride relative to the weight of the mixture.

11. The method of claim 4, wherein said dispersing and stabilizing agent is at least one selected from the group consisting of:

- (1) alkyl or alkenyl ethers or esters of a polyol,
- (2) N-acyl amino acids and derivatives thereof, and peptides N-acylated with an alkyl or alkenyl radical, and salts thereof,
- (3) alkyl or alkenyl ether or ester sulphates, derivatives thereof and salts thereof,
- (4) polyoxyethylenated fatty alkyl or alkenyl ethers or esters,
- (5) polyoxyethylenated alkyl or alkenyl carboxylic acids and salts thereof,
- (6) N-alkyl or alkenyl betaines,
- (7) alkyl or alkenyl trimethylammoniums and salts thereof, and
- (8) mixtures thereof.

12. The method of claim 1, wherein the cubic gel particles are formed from a mixture of at least two amphiphilic compounds, one of the amphiphilic compounds being capable of

forming a lamellar phase in the presence of water, and the other being capable of forming an inverse hexagonal phase in the presence of water.

13. The method of claim 12, wherein the amphiphilic compound capable of forming a lamellar phase is selected from the group consisting of diglyceryl monoesters.

14. The method of claim 12, wherein the amphiphilic compound capable of forming an inverse hexagonal phase is selected from the group consisting of diglyceryl mono-, di- or triesters and aminopolyol carbamates, and mixtures thereof.

15. The method of claim 12, wherein the amphiphilic compound capable of forming a lamellar phase is selected from the group consisting of diglyceryl isostearate and diglyceryl monooleate, and mixtures thereof.

16. The method of claim 12, wherein the amphiphilic compound capable of forming an inverse hexagonal phase is selected from the group consisting of diglyceryl 2-decyltetradecanoate, diglyceryl di/trioleate, 3-N-(2-decyltetradecyloxycarbonyl)amino-1,2-propanediol and N-2-dodecylhexadecyloxycarbonyl-N-methyl-D-glucamine, and mixtures thereof.

17. The method of claim 12, wherein the mixture of the two amphiphilic compounds consists of from 10% to 90% by weight of the amphiphilic compound capable of forming a lamellar phase and from 10% to 90% by weight of the amphiphilic compound capable of forming an inverse hexagonal phase, relative to the total weight of the mixture.

18. The method of claim 12, wherein the mixture of the two amphiphilic compounds is selected from the group consisting of the following mixtures:

- 55% to 75% by weight of diglyceryl isostearate and 25% to 45% by weight of diglyceryl 2-decyltetradecanoate;

- 30% to 65% by weight of diglyceryl isostearate and 35% to 70% by weight of diglyceryl di/trioleate;

- 75% to 85% by weight of diglyceryl isostearate and 15% to 25% by weight of 3-N-

(2-decyltetradecyloxycarbonyl)amino-1, 2-propanediol;

- 55% to 75% by weight of diglyceryl isostearate and 25% to 45% by weight of N-2-dodecylhexadecyloxycarbonyl-N-methyl-D-glucamine; and

- 15% to 50% by weight of diglyceryl monooleate and 50% to 85% by weight of diglyceryl di/trioleate.

19. The method of claim 1, wherein the cubic gel particles have a size ranging from 0.05 μm to 1 μm .

20. The method of claim 3, wherein the dispersion of cubic gel particles further comprises at least one water-insoluble ionic amphiphilic lipid.

21. The method of claim 20, wherein said water-insoluble ionic amphiphilic lipid is at least one selected from the group consisting of:

- (i) phospholipids,
- (ii) phosphoric esters of fatty acids,
- (iii) water-insoluble N-aryl derivatives of glutamic acid and salts thereof,
- (iv) sodium cetyl sulphate,
- (v) sodium cocoylmonoglyceride sulphate, and
- (vi) water-insoluble quaternary ammonium derivatives.

22. The method of claim 1, wherein the cubic gel particles further comprise at least one hydrophilic and/or lipophilic active principle.

23. The method of claim 1, wherein the cubic gel particles are present in an amount ranging from 0.1% to 10% by weight relative to the total weight of the composition.

24. A treatment process for protecting a keratin material against the effects of pollution, comprising applying to keratin material a composition comprising an effective amount of cubic gel particles in a physiologically acceptable medium.

25. A treatment process for improving the cell respiration and/or for reducing

